

DEAR EDITOR,

We believe you are expecting a letter from present students, and now at the last moment have to rack our brains to think of news that may interest you. First let us say how much we are looking forward to the Conference and to meeting many whom we know and have heard of. Miss Wix has received the names of the following:—Misses Parish, Drury, Duyvis, Fountain, Russell, Hertzell, Bell, Lake. She ventures to hope that others who come will not bring too many sisters or friends, in case the rooms should not furnish sufficient accommodation.

You will be glad to hear that Miss Mason seems better this term, and is more amongst us.

We are just settling down into our new dignity as Seniors; but I am afraid the ten new Juniors, who very quickly made themselves at home, do not regard us with quite the reverential awe due to us. They are now fully initiated into the laws of the House, "the place where the impossible is uncomplainingly and successfully done." There is not much to say about them at present, except that they wear the regulation skirt, and are keen walkers on the whole. Mrs. Franklin is staying here, and Olive attends the practising school while their stay lasts.

The entertainments began with a very delightful Burne-Jones evening. This added new interest to many of the pictures in the House.

We are to give another representation of "Antigone," for which we are busy making preparation at the present time.

We like the change of work immensely, and diligently slave at Sloyd on half-holidays.

The Millet house seems somewhat deserted now it is uninhabited, and we hope the cubicles will again be occupied before the end of the year.

We are getting positively hardened to crits, and have begun the year with two "excellent" marks. The school is flourishing, there are new pupils, and there have been several promotions.

Mary Parsons and Norah Clendinnen have left; the latter is to go abroad with her sister Kathleen at Easter.

The weather, an item of great interest to us all, has not been original, although we did get a few days' skating at the

beginning of the term. Stock Ghyll has been exceptionally full.

The head gardener hopes to send some garden news to the next number. The gardens have needed much rearrangement, as there are so few Juniors; most of whom are very enthusiastic about them.

With best wishes for the New Year, from

THE STUDENTS.

THE MYSTERIES OF MATHEMATICS.

There are a great many mathematical truths which are no more to be "understood of the people" than abstruse theological speculations. To the helpless child struggling with the first rules of arithmetic it is sometimes a treat to come upon some of the mysteries which by the time it can do "progressions" it may explain, but which at present will only fascinate. It would be most interesting to make a collection of all the more or less magical manipulations which can be effected by nine. "Casting out the nines" seems simple enough as a hard and fast rule; the mystery lies in the wherefore.

Two arithmetical mysteries are here given in case they are not already known. Would those to whom others are familiar communicate with the Editor, that we may form a collection of them.

1. The puzzler shall ask the victim to write down a row of any given figures, as—

6 4 2 3 1 0

Then, having shown this, another row of the same number of places.

For the third row the puzzler will take the paper and add such figures as added to the second row will make nine.

6 4 2 3 1 0

1 2 5 7 3 4

8 7 4 2 6 5

The victim shall then add another row of figures, and the

puzzler shall again make a row which added to the last shall make nine.

(1)	6	4	2	3	1	0
(2)	1	2	5	7	3	4
(3)	8	7	4	2	6	5
(4)	3	4	1	8	7	9
(5)	6	5	8	1	2	0

2 6 4 2 3 0 8

It will be observed that the answer is exactly the same as the first line with 2 put before the first figure and subtracted from the last. This will invariably be true of any five lines of addition provided that lines two and three and four and five make nines when added together.

2. The second puzzle runs thus:—write down any sum of pounds, shillings, and pence, only the pounds must not be more than nine, and the pence must be less than the pounds.

£	s.	d.
7	14	2

invert the line and subtract,

£	s.	d.
7	14	2
2	14	7

4 19 7

invert the answer and add,

£	s.	d.
4	19	7
7	19	4

12 18 11

The answer will always be the same whatever figures are taken, provided the pounds are under nine and the pence less than the pounds!

GAMES.

TELEGRAMS.

This game may be played by any number. Pass a long piece of string over the backs of chairs or other articles of furniture, so that it will slip easily when its two ends are knotted together. In joining the string leave long enough ends with which to tie on the telegrams. These latter must be written on slips of paper, tied on to the string, and so passed on from one person to the other by pulling the string. Thus messages may be sent backwards and forwards, from place to place, and from person to person, each person acting as town, office, telegraphist, and clerk.

Make a scrawl of no definite shape on a piece of paper, which hand to the next player, who must fill it in making some grotesque figure or monster with the original outline in three minutes.

For many players. All the even numbers think of some object known to themselves, all the uneven of where they will hide it. The objects and their hiding places are then announced in turn. These are apt to be a little startling in juxtaposition.

CHILDREN'S SAYINGS.

Ann (declining cat in English): nom.: cat; obj.: cat; possessive; cataarh!

Child (reading Natural History aloud): "A race between an Indian and a bull-frog," stops and looks horrified, "How awfully ugly that must be!"

Teacher: "Why? one would leap and the other run, but why should that be ugly?"

Child: "Oh! *that* sort of race! I thought it meant a cross-breed!"